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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/464,784	12/17/1999	MICHAEL B. FREEMAN	COS99034	8064

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EXAMINER
CHOW, CHARLES CHIANG

ART UNIT	PAPER NUMBER
2684	

DATE MAILED: 01/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/464,784	FREEMAN ET AL.	
	Examiner	Art Unit	
	Charles Chow	2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 December 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☒ Claim(s) *1-31* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Office Action for
Applicant's Amendment
(December/23/2002)

1. Regarding applicant's request for reconsideration, filed 12/23/2002, after the final rejection, the final rejection is withdrawn because of the unclear teachings of the billing processing by a co-carrier access billing information for access billing system for settlement with the internet service provider ISP. The grounds of rejection are changed with additional references from the prior art to Walker (US 5,949,875) and Ganesan (US 6,055,567). Walker-'875 teaches the billing collection system of the computer user for accessing information, services, provided by servers in the internet, Web, 900 network (abstract, figure in cover page, Fig. 2, Fig. 6, Fig. 15; col. 1, lines 8-21; col. 4, lines 1-8; col. 8, lines 1-3). The 900 number is for the user to access internet web service (col. 2, line 39-44) for information or service or goods (col. 1, line 9-10). The user's billing information is collected and transfer to local exchange carrier LEC and the LEC distributes the phone bill to user for user's payment (col. 7, line 41-50; col. 9, line 65 to col. 15). Hence, Walker teaches the collecting/processing of the user's internet phone bill for the internet service provider ISP. Besides, in the last office action, Liu (US 5,898,780), below, has shown the ISP and billing. Ganesan-'567 teaches the distributed data processing techniques for processing bill (abstract) including phone bill 148 (Fig. 18). Ganesan considers the billing entity 56 and billing aggregator 94 for collecting and procession phone bill (Fig. 7, Fig. 13b). As shown in col. 14, lines 16-34, col. 17, lines 3-20. Ganesan teaches the billing entity 56 processes partner's messages to/from an established-billing-aggregator partner (co-carrier). Such co-carrier-partnership is required if a large group of subscribers are using the billing aggregator 94, for

collecting all of their bills via billing aggregator 94. The billing aggregator 94 is treated as a proxy for the billers that it represent. Hence, Ganesan teaches the co-carrier billing aggregator 94 for processing the phone bill for the partnership with billing entity 56, proxy for the billers.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brouckman et al. (US 6,134,307) in view of Heindel et al. (US 6,304,857B1), and further in view of Walker et al. (US 5,949,875) and Ganesan et al. (US 6,055,567).

Brouckman discloses **claim 1**, an apparatus (network 100) for managing call records (abstract, front figure) in the signaling network (Fig. 3, gateway 110, the MSC 310) to carry and convert user call events (abstract, col. 1, summary of the invention). The gateway (110) interfaces with the signaling network (MSC 310, PSTN 31), the internet service provider as shown in col. 7, line 56-col. 8, line 2, the SPnet 524 is a personal computer for internet, Web services.

Brouckman discloses the operative to collect billing data from signaling network in the first data structure format (from plurality of sources, col. 10, line 52-53); and a network processor operative to receive the call billing record (front figure, the BSS 430 receives

CDRs from gateway 110; the CRD is created in the gateway in the network processor element and extracted by the operations maintenance controller gateway 502, col. 4, line 35-42).

Brouckman discloses the receiving the collected call billing data (collection process, col. 4, line 35) in the first format (receiving plurality of call events fro plurality of source in the global network, col. 10, line 53-54) for the gateway (col. 4, line 38), and convert the collected call billing data from the first data structure format to a second data structure format (data structure format of the second destination, col. 10, line 55 to col. 11, line 10) Besides, Brouckman has considered the second format for sending different entities around the world after the call record conversion (abstract, claim 1).

For the purpose of clarifying of the claimed features for the transmit the call billing data in the second format to data network for processing the settlement with internet and the local exchange carrier,

Heindel teaches the distributed billing system with the gateway interfacing biller and the service center (title, abstract, Fig.1-3; col. 1, lines 6-10; col. 55 to col. 4, line 19). The system comprises the Biller Integrated Systems BIS 34(1)-34(M) connected to respective biller systems 22(1)-22(m) using the translator 38(1)-38(M) to convert the different biller data formats into the format that could be accepted by internet data network 30 (abstract, col. 2, lines 42-48; col. 4, lines 20-30). The billing statement is distributed or email to consumers of banks from internet network 32 (col. 5, lines 56-61; col. 6, lines 1-6). Thus, the second translated format from BIS is transmitted to internet data network 30 for processing by the

co-carrier at the system service center 24. Heindel's BIS gateway 80, service center gateway 86, payment gateways 84, 90, are performing the incumbent local exchange interface to different biller system 22(1)-(M). It is clearly obvious to include Heindel's biller integrated system having the call billing data translator to translate the different format from each biller to the acceptable format via internet data network to the center service system for processing the billing data, to Brouckman. By doing so, the system could efficiently translate the billing data format to center service system for processing, as shown by Heindel. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify and add Heindel's biller integrated system having translator transmitting different format for each biller via internet data network to the center service system for billing data processing, to Brouckman, such that the system could efficiently translate the billing data format to center service system for processing.

In the above it is not clear about the billing processing by a co-carrier access billing system for settlement with the internet service provider.

Walker-'875 teaches the billing collection system of the computer user for accessing information, services, provided by servers in the internet, Web, 900 network (abstract, figure in cover page, Fig. 2, Fig. 6, Fig. 15; col. 1, lines 8-21; col. 4, lines 1-8; col. 8, lines 1-3). The 900 number is for the user to access internet web service (col. 2, line 39-44) for information or service or goods (col. 1, line 9-10). The user's billing information is collected and transfer to local exchange carrier LEC and the LEC distributes the phone bill to user for user's payment (col. 7, line 41-50; col. 9, line 65 to col. 15). Hence, Walker teaches the

collecting/processing of the user's internet phone bill for the internet service provider. Ganesan-'567 teaches the distributed data processing techniques for processing bill (abstract) including phone bill 148 (Fig. 18). Ganesan considers the billing entity 56 and billing aggregator 94 for collecting and procession phone bill (Fig. 7, Fig. 13b). As shown in col. 14, lines 16-34, col. 17, lines 3-20. Ganesan teaches the billing entity 56 processes partner's messages to/from an established-billing-aggregator partner (co-carrier). Such co-carrier-partnership is required if a large group of subscribers are using the billing aggregator 94, for collecting all of their bills via billing aggregator 94. The billing aggregator 94 is treated as a proxy for the billers that it represent. Hence, Ganesan teaches the co-carrier billing aggregator 94 for processing the phone bill for the partnership with billing entity 56, proxy for the billers. It is apparently obvious, if not inherent, to include Walk's collecting/ processing of the user's internet phone bill for the internet service provider, and Ganesan's co-carrier partnership with the billing entity, to Brouckman, such that the system could be upgraded for processing billing information for the service provided by the internet servers using the co-carrier partnership. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify and include Walker's collecting/processing of the user's internet phone bill for the internet service provider, and Ganesan's co-carrier partnership with the billing entity, to Brouckman as modified above, such that the system could be upgraded for the internet service's billing collection via the partnership.

Regarding to the local exchange carrier, the incumbent local exchange carrier, referring to Brouckman (the call conversion process of the call event records, there are incumbent

local exchange carrier in the local gateway 110, PSTN 125 in Fig. 1 for providing the call routing service using location area codes LAC in col. 3,lines 1-17 and the gateway 110 has the MSC 310 switch in col. 3, lines 18-23).

Regarding **claim 2,** Brouckman discloses the signaling gateway 110 in Fig. 3, which comprising the signaling elements mobile switching center MSC 310, the gateway management system GMS for providing the administration and maintenance support for each of the gateway subsystem (column 3, line 29-35).

Regarding **claim 3**, Brouckman discloses the coupling to the gateway in his interface to gateway 110, utilizing the Gateway Business system 420 to service provider system 410, and interfacing to message origination center, and switch 310, of the gateway 110 (figure in the front figure).

Regarding **claim 4**, Brouckman discloses in the front figure that the Business Support system 430 polling the call detail records CDR from gateway 110 (front figure), and the gateway generate the CDR (col. 4, line 38-40), for operative to poll.

3. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brouckman in view of Heindel, Walker, Ganesan, and further in view of Witzman et al. (US 5,737,399).

In the above it does not include the raw data of the call event records (CERs).

Witzman teach **claim 5**, the first data structure format comprises raw ASG call event records (CERs). See in abstract, Fig. 2A, it shows a network's system architecture having the

centralizing storage and verification element. In column 1, line 18-21, in column 3, line 4-12, in column 4,line 63 to column 5, line 4, it shows the captured billing records comprises the call event record (CER). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify and add Witzman's raw ASG to Brouckman as modified above, such the first format could be easily converted to the other secondary structured formats.

4. Claims 6, 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brouckman in view of Heindel, Walker, Ganesan, and further in view of Doherty et al. (US 5,333,184).

In the above, it does not include the AMA format.

Doherty teaches **claim 6**, a data network and transmit the second data structure format to the data network for billing processing. See in abstract, in Fig. 1, it shows the system utilizes the exchange message interface message format, EMI, carrying the primary interexchange carrier indicator for call billing purpose associated with the subscriber. In column 7, line 52-61, column 8, line 5-15, column 9, line 22-31, it shows the system generates the AMA message format for the call, converts said AMA format to the EMI message format, and transmits the EMI message record format to the call rating system. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify and add Doherty's transmitting in the EMI second format to the call rating system, to Brouckman as modified above, such that system could be upgraded and more flexible of handling a second billing data format.

Regarding **claim 7**, the disclosure above in claims 1-4 has shown the claimed features for the data network communicating with the network processor and the receiving of the second data AMA format, although Broukman et al. discloses the conversion to plurality of CDRs ro the format utilized by the destination.

5. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brouckman in view of Heindel, Walker, Ganesan, and further in view of Kay et al. (US 5,575,894).

In the above, it does not include the local traffic system.

Kay teaches **claim 8**, the data network comprises a local traffic system (LTS). See in abstract, Fig. 1-3, and in column 3,1ine 3-25, it shows a virtual foreign exchange service system having at least one interoffice trunk carries communication traffic between the local exchange central office switched system and the foreign exchange central office switching system for billing purpose having the selective procedures. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify and add Kay et al.'s local exchange central office of the local call traffic to Brouckman as modified above, such that the local billing data could be easily collected by the local exchange central office.

Regarding the second data structure format , AMA format. Refer to the above disclosure discussion in claims, 1-4.

Regarding **claim 9**, Brouckman discloses the network platform in col. 7, line 60-64,

the Service provider net system 524 is a personal computer with software to access Web, Internet, for the processor network platform.

Regarding **claim 10**, the claimed features are covered by the disclosed patents shown above in claims 1-4. Therefore, it is rejected for the same rationale, for the interfacing the signaling network (Fig. 3), the internet service provider.

6. Claims 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brouckman in view of Heindel, Walker, Ganesan, and further in view of Herbert (US 5,333,183).

In the above, it does not clearly indicate the periodically receiving of the billing data.

Herbert teaches **claim 11**, the data network is operative to periodically receive the collected call billing data in the second data format (see in column 11, line 67 to column 12, line 47, and in column 28, line 22-31, it shows processor is periodically checks the statistics of the call message-detail-record MDR data records for billing purpose). Regarding data-network, refer to the disclosure in claim 1 above.

Herbert teaches **claim 13**, the network processor polls the gateway at preset interval (see in column 28, line 22-31, and in table 1, it shows the schedules for periodically running the processes to invoke the administrative processor interface APIF for collecting the message processing). Also, see claim 16, 35, as taught by Herbert. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify and add Herbert's scheduled periodically polling of the APIF for collecting call records, to Brouckman, such that the billing collection could update the records according to the different time of the days. The operative to poll has shown above.

In the above, it does not include the AMA code 625 format.

Herbert teaches **claim 15**, the data network comprises a local traffic system (LTS), and wherein the received call billing data in the second data structure format comprises an industry standard automatic message accounting (AMA) structure code 625 format that is used to implement billing processing (the AMA code 652, in Table 7, it shows the structured AMA code 625 format is utilized in the MDR data record system).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify and add Herbert's AMA code 625 format to Brouckman et al., such that the second structure format could be specified as the AMA code 625 format.

Regarding **claim 12,** referring to examiner's comment in claim 4 above for the claimed features for this claim.

Regarding **claim 14**, referring to examiner's comment in claim 11 above for the claimed features for this claim.

Regarding **claim 16**, referring to examiner's comment in claim 3 above for the claimed features for this claim.

7. Claims 17-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brouckman in view of Heindel, Walker, Ganesan, and further in view of Liu et al. (US 5,898,780) and Wang (US 5,991,746).

In the above, it does not include the first and second computers.

Liu teaches **claim 17**, the providing a first computer device, a second computer device, and a communication link, the first computer device communicating with the network and the

second computer device communicating with the first computer device via the communication. See in Fig. 1, in abstract, in column 2, line 38-65, the sever software computer 42 of the billing module system 38 is in communication with the server computer 14 and remote computer 26 for collecting billing records. In column 1, line 9-25, it shows the Internet Service Provider ISP. Liu et al. teaches the collecting call billing data with the first computer device in a first data structure format (See in Fig. 1, and Fig. 3, it shows the local network ISP 63 having billing system 38, and ISP 64 having the billing system 69 are collecting call billing data). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify and add Liu 's billing system module with computer server for local ISP to Brouckman as modified above, such that the billing system could collect and process the billing records from the internet.

In the above, it does not include the data communications (comm) protocol.
Wang teaches the transferring the call billing data using a data comm protocol... computer device. See in abstract, it shows the data transferring protocol, TFTP protocol, is utilized for the billing data collector. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify and add Wang's TFTP data transferring comm protocol to Brouckman et al. as modified above, such that the transferring of the billing data could be according to the protocol specified in the TFTP data comm protocol.
Regarding the converting the call billing data with the second computer device from the first data structure to a second data structure format, Brouckman discloses the conversion of

plurality of call event records for destination in the world, and the oprative ot carry user calls, the first computer device interfacing the signaling network and internet service.

Regarding **claims 18,19, 23**, the claimed features are covered by the disclosed patents shown in claim 17 above. Therefore, it is rejected for the same rationale.

Regarding **claims 20, 21, 22,** the claimed features are covered by the disclosed patents shown in claims 1, 3 above which also provides the disclosed features for claims 20-22, for the transferring billing data with transfer protocol, TCP, the over the world communication link, the gateway interfacing and internet service provider.

8. Claims 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brouckman in view of Heindel, Walker, Ganesan, and further in view of Jaiswal et al. (US 6,002,754).

In the above, it does not include the invoice.

Jaiswal teaches **claim 24**, the generating an invoice format for data network for delivery to individual users. See in column 4, line 40-54, it shows the format processor sends billing data, invoice, to customer supplied billing system 60. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify and add Jaiswal et al.'s billing data invoice to Brouckman et al., such that the user could directly receive the billing invoice information.

Regarding **claim 25**, the claimed features are covered by the disclosed patents shown in claim 3 above. Regarding **claim 26**, the claimed features are covered by the disclosed patents shown in claims 1, 3, 4 above for the transferring the call billing data.

9. Claims 27-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brouckman in view of Heindel, Walker, Ganesan, and further in view of Witzman et al. (US 5,737,399).

In the above, it does not include the generating of the alarm signal.

Witzman et al. teach **claim 27**, the generating an alarm signal with the network processor. See in column 2, line 31-55, in column 3, line 13-19, in column 12, line 47-6, it shows the alarm signal is generated according to the collected data from NIC and the corresponding data stored in the network database. Also, Herbert shows the alarm display and alarm report in Fig 19. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify and add Witzman's alarm generating of the network information concentrator (NIC) to Brouckman, such that the errors in the billing data collection system could be detected from displayed the alarms.

Regarding **claims 28, 29, 30, 31**, refereeing to examiner's comment in claim 1 above for the incumbent local exchange carrier for the apparatus, system, and methods.

Response to Arguments and

Conclusion

10. Applicant's arguments with respect to claims 1-31 have been considered but are moot in view of the new ground(s) of rejection.

Regarding applicant's arguments for the no teachings of the billing processing by a co-carrier access billing system for settlement with the internet service provider ISP; the prior art to Walker-'875 and Ganesan-'567 provides the above claimed features.

Walker-'875 teaches the billing collection system of the computer user for accessing information, service using the internet, Web, 900 network (abstract, figure in cover page, Fig.

2, Fig. 6, Fig. 15; col. 1, lines 8-21; col. 4, lines 1-8; col. 8, lines 1-3). The 900 number is for the user to access internet web service (col. 2, line 39-44) for information or service or goods (col. 1, line 9-10). The user's billing information is collected and transfer to local exchange carrier LEC and the LEC distributes the phone bill to user for user's payment (col. 7, line 41-50; col. 9, line 65 to col. 15). Hence, Walker teaches the collecting/processing of the user's internet phone bill for the internet service provider. Besides, in the last office action, Liu (US 5,898,780), has shown the ISP for billing.

Ganesan-'567 teaches the distributed data processing techniques for processing bill (abstract) including phone bill 148 (Fig. 18). Ganesan considers the billing entity 56 and billing aggregator 94 for collecting and procession phone bill (Fig. 7, Fig. 13b). As shown in col. 14, lines 16-34, col. 17, lines 3-20. Ganesan teaches the billing entity 56 processes partner's messages to/from an established-billing-aggregator partner (co-carrier). Such co-carrier-partnership is required if a large group of subscribers are using the billing aggregator 94, for collecting all of their bills via billing aggregator 94. The billing aggregator 94 is treated as a proxy for the billers that it represent. Hence, Ganesan teaches the co-carrier billing aggregator 94 for processing the phone bill for the partnership with billing entity 56, proxy for the billers.

In view of the above disclosures, applicant's arguments are moot and claims 1-31 are remaining in the rejection manner.

11. The Group and/or Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this

application should be directed to Group Art Unit 2684. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Chow whose telephone number is (703)-306-5615. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Hunter, can be reached at (703)-308-6732.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington D. C. 20231

Or Faxed to: (703)-872-9314 (for formal communications intended for entry) Or hand-delivered to: Crystal Park ll, 2121 Crystal Drive, Arlington, VA, Sixth Floor, Receptionist.

For general inquiry or relating to the status of this application should be directed to the Group Receptionist whose telephone number is (703)-306-0377.

Charles Chow

January 10, 2003.